REMARKS

Applicant appreciates the Examiner's consideration of the Response filed November 10, 2004. Applicant respectfully requests reconsideration and allowance of the subject application in view of the comments provided in the foregoing. Claims 28-30 and 48-64 are pending in the application.

Applicant thanks the Examiner for the analysis presented in the current Office Action.

Claim Rejection under 35 U.S.C. § 102

Claims 28-30 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,098,093 to Bayeh et al. (hereinafter, "*Bayeh*"). Applicant respectfully traverses the rejection.

Applicant reiterates the following for the Examiner's consideration.

Claim 28 defines a stateless distributed computer system, comprising:

> a network having one or more network components to route requests from a first endpoint device to a second endpoint device and to route replies from the second endpoint device back to the first endpoint device, wherein at least one reply contains state information pertaining to the second endpoint device; and
>
> the network being configured to maintain the state information and to reassociate the state information with a subsequent request from the first endpoint device to the second endpoint device.

As recited in claim 28, the claimed stateless distributed computer system includes a network between two endpoints and the network is configured to maintain the state information, rather than the state information being kept at either of the two endpoints. As described in one exemplary implementation in the subject application, with reference to Fig. 8 (reproduced below) and

PAGE 15/25 * RCVD AT 8/5/2005 2:39:19 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-6/34 * DNIS:2738300 * CSID:2063154004 * DURATION (mm-ss):06-02

accompanying text beginning on page 17, a network system 800 has a first endpoint device 802 and a second endpoint device 804 interconnected via a network 806. The network 806 includes one or more specially configured computing devices whose task is to route messages between the endpoint computing devices 802 and 804. The network computing devices may include routers, hubs, relays, repeaters, satellite uplinks and downlinks, RF transceivers, and the like.

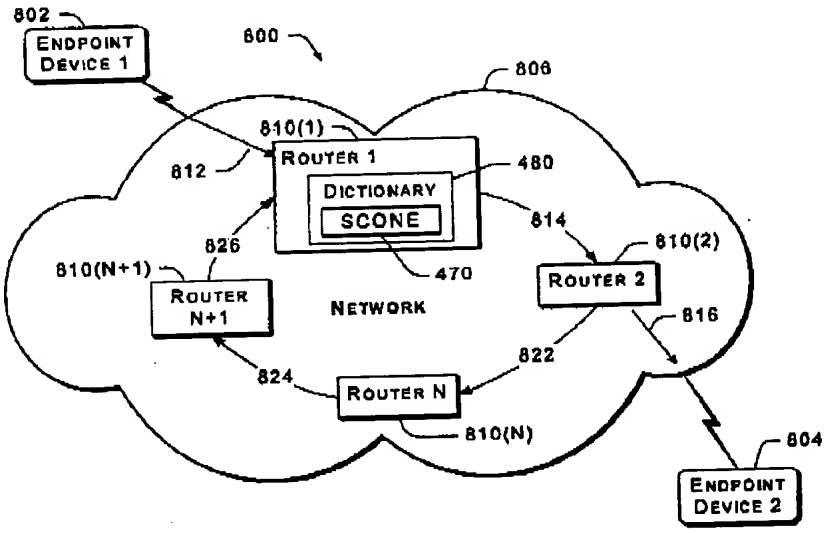


Fig. 8

A message may be routed, for example, from the first endpoint 802 to the second endpoint 804 through routers 810(1) and 810(2) along path segments 812, 814, and 816. Suppose the second endpoint 804 responds to the request by returning a reply packet that contains a "state-caching object for a network element" or "SCONE" 470. The reply packet may be routed back to the first endpoint 802 via the same or different path through the network 806.

PAGE 16/25 * RCVD AT 8/5/2005 2:39:19 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-6/34 * DNIS:2738300 * CSID:2063154004 * DURATION (mm-ss):06-02

Rather than caching the SCONE 470 on the first endpoint 802 or second endpoint 804, the network 806 keeps the SCONE 470 on behalf of the two endpoint devices 802 and 804.

According to one implementation, a network component copies the SCONE 470 from the reply packet and stores it. This is represented in Fig. 8 by the SCONE 470 being stored in router 810(1) in a dictionary 480 by service ID. If the first endpoint device 802 subsequently sends another request to the second endpoint device 804, the router 810(1) notes the reuse of the service ID and reattaches the SCONE 470 to the packet to return the state information to the second endpoint device 804. If no subsequent request is made, the SCONE 470 remains on the router 810(1) until it expires and is removed from memory.

According to a second implementation, the SCONE 470 is not kept at one router, but instead is continuously routed among various network components indefinitely or until timeout. In this example, the SCONE 470 may be circulated among four routers 810(1), 810(2), 810(N), and 810(N+1), as represented by path segments 814, 822, 824, and 826. If a subsequent connection between the first and second endpoint devices is made, first router 810(1) to transport the message issues a distributed query to the other routers 810(2), 810(N), and 810(N+1) to locate the matching SCONE 470 if any. The SCONE 470 is subsequently reassociated with a request and returned to the second endpoint 804 to restore state information.

To summarize the above exemplary embodiments of the present invention, the network 806 is the communication medium for the first endpoint device 802 and the second endpoint device 804. When the first endpoint device 802 sends a communication/request to the second endpoint device 804, the network 806

PAGE 17/25 * RCVD AT 8/5/2005 2:39:19 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-6/34 * DNIS:2738300 * CSID:2063154004 * DURATION (mm-ss):06-02

facilitates routing that communication in an appropriate manner. Similarly, the network 806 allows the second endpoint device 804 to send communications/responses to the first endpoint device 802. The endpoint devices 802 and 804 may be various computing devices (e.g., clients, servers, server cluster/farm).

Prior art networks are fundamentally different from the network 806 of the exemplary embodiments of the present invention. Such prior art networks are only responsible for routing communications to and from the various computing devices that are connected thereto. The network 806 offers the additional and advantageous capabilities discussed above.

Turning now to the *Beyeh,* the relied upon document fails to disclose the system of claim 28. *Bayeh* discloses a system for maintaining sessions in a clustered server environment. The sessions are maintained as "servlets", which are small executable code objects used in Java-based products. In the Background section, *Bayeh* noted that one such product, the Java Web Server Toolkit from Sun Microsystems, only described a session tracking facility for a single Web server. (*Bayeh*, col. 4, lines 61-64). Hence, the goal of *Bayeh* was to extend session services to a clustered server environment. (*Bayeh*, col. 8, lines 59-66).

Bayeh describes a clustered server environment where multiple Web servers 60, 62, and 64 are arranged behind a load-balancing host 59 to receive and respond to incoming client requests 100, 101, and 102. (*Bayeh*, Fig. 3, col. 8, lines 42-58). A servlet engine 70, 72, and 74 is provided at each Web server. (*Bayeh*, col. 8, line 64 to col. 9, line 6). *Bayeh* describes that session information used to respond to client requests can be maintained by the servlet objects, and kept in a session pool

PAGE 18/25 * RCVD AT 8/5/2005 2:39:19 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-6/34 * DNIS:2738300 * CSID:2063154004 * DURATION (mm-ss):06-02

of a session server for subsequent transactions. All of this occurs at the server cluster behind the load-balancing host 59.

To describe further, *Bayeh* teaches that the session information is stored in a Web server 60 (session server) that includes the servlet engine 70. According to Bayeh, this Web server 60, which is designated to store the session information, does not accept and/or respond to client requests. (*Bayeh*, col. 9, lines 31-38). As a matter of fact, when a given Web server is acting as the session server, the load balancer 59 ensures it never receives client requests.

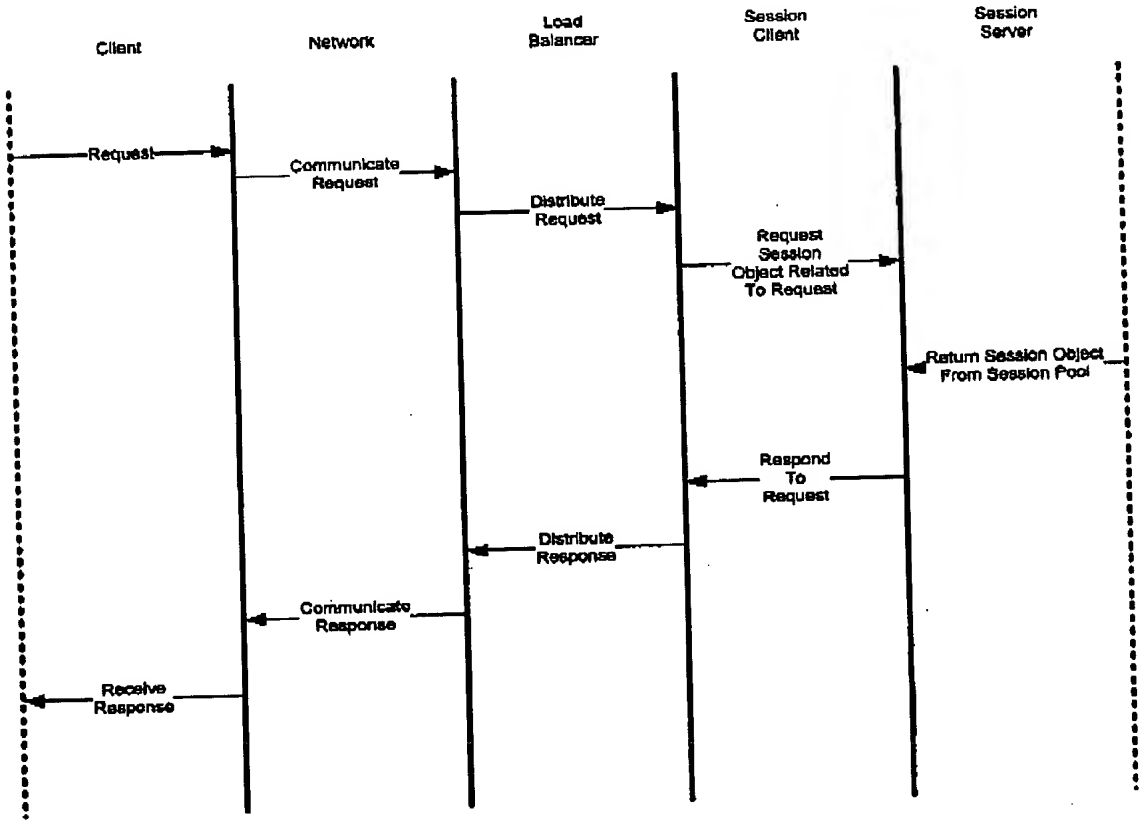
Figs. 4A-4C of *Bayeh* illustrate a process that occurs when a request is received by the Web server cluster illustrated in Fig. 3. When a client request/communication is received, the load balancer 59 makes a determination as to which server (60, 62, or 64) in the Web server cluster should receive the client request. As was discussed above, the server that is designated as the session server is configured as a non-receiving source for incoming client requests/communications. Accordingly, the load balancer 59 will forward the client request to Web server 62 or 64.

The server receiving the client request uses a servlet engine to invoke a method that is defined to retrieve session information related to the client request. (*Bayeh*, col. 11, lines 20-27). The invoked method allows the server to communicate with the session server to retrieve the session object from the session pool held by the session server. (*Bayeh*, col. 11, lines 43-46).

Several processes occur at the session server once the server that received the client request begins communicating with the session server. This Response will discuss only those actions asserted by the Examiner as being relevant to the present invention.

When a valid request for session information is received by the session server, a servlet engine of the session server retrieves the appropriate session object from the session pool and returns it to the server requesting the information. (*Bayeh*, col. 12, lines 22-28; col. 13, lines 7-8). Then, the sever that received the client request may respond to the client request issued by the load balancer 59.

To aid the Examiner's understanding of the invention according to *Bayeh*, the Applicant provides the following diagram of interactions that occur once the load balancer 59 receives a client request from a requesting client.



Bayeh's architecture merely describes maintaining state information at a server cluster. The server cluster includes one server 60 that behaves as the session server and holds all of the session objects in a session pool, and one or

PAGE 20/25 * RCVD AT 8/5/2005 2:39:19 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-6/34 * DNIS:2738300 * CSID:2063154004 * DURATION (mm-ss):06-02

more servers (62, 64) that behave as session clients for handling client requests distributed by a load balancer 59. The distribution in the architecture is shown in the diagram provided on the foregoing page.

Nowhere does *Bayeh* ever show or consider a network between the client(s) and the server cluster (e.g., a network between the client(s) and the load-balancing host in Fig. 3), where the network itself maintains the state information. Instead, the network according to the *Bayeh* architecture, which is illustrated in the indicated diagram, is merely a medium for conveying information.

Bayeh is entirely silent as to the "stateless distributed computer system" of claim 28, as *Bayeh* does not discuss or disclose "a network having one or more network components to route requests from a first endpoint device to a second endpoint device" where "the network [is] configured to maintain the state information and to reassociate the state information with a subsequent request from the first endpoint device to the second endpoint device" as required by claim 28.

In the current Office Action, the Examiner states "the two clients are part of the network, thus the information is already part of the network." It is unclear what the Examiner asserting with this statement. If the Examiner is saying the network between the session server and the session client maintains the session objects, the Applicant respectfully disagrees. Nowhere does *Bayeh* teach or suggest this concept. Instead, *Bayeh* is clear that the session objects are held in a session sever of the server cluster.

The session server is <u>not</u> the same as the "network" described in claim 28. It <u>must</u> be if *Bayeh* was correctly relied upon by the Examiner. As is set forth in claim 28, "the network [is] configured to maintain the state information and to

PAGE 21/25 * RCVD AT 8/5/2005 2:39:19 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-6/34 * DNIS:2738300 * CSID:2063154004 * DURATION (mm-ss):06-02

reassociate the state information with a subsequent request from the first endpoint device to the second endpoint device." Session objects are held in the session server taught by *Bayeh*, but nothing in the relied upon patent document teaches or suggests that the session server reassociates these session objects with "a subsequent request from the first endpoint device to the second endpoint device," as does the network set forth in claim 28. Instead, as is shown in the diagram on page 17 of this Response, the session client that requests a given session object and retrieves the same from the session server is the entity in *Bayeh* that handles the reassociation process. However, the session client is unable to store session objects, since the session server of the server cluster has this sole responsibility. (*Bayeh*, col. 9, lines 26-38). Therefore, both the session client and the session server are unable to operate in the manner the "network" of claim 28 functions.

With the session client and server eliminated as candidates that teach the "network" set forth in claim 28, the only remaining device taught in *Bayeh* that processes client requests is the load balancing host 59. *Bayeh* indicates the load balancing host 59 operates in a known manner. (*Bayeh*, col. 8, lines 49-58). Therefore, the load balancing host 59 simply routes client requests to servers in the server cluster based on an amount Web traffic being handled by the various servers in the cluster. Therefore, the load balancing host 59 does not function in the same manner as the "network" recited in claim 28.

For the reasons stated above, claim 28 is allowable over *Bayeh*. Applicant respectfully requests that the § 102 rejection be withdrawn.

Dependent claims 29 and 30 depend from claim 28 and are allowable by virtue of this dependency. Moreover, these claims recite features that, when taken together with those of claim 28, define systems not disclosed by *Bayeh*.

PAGE 22/25 * RCVD AT 8/5/2005 2:39:19 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-6/34 * DNIS:2738300 * CSID:2063154004 * DURATION (mm-ss):06-02

For example, **claim 29** recites that "at least one of the network components stores the state information."

Furthermore, **claim 30** recites that "multiple network components continually route the state information amongst themselves to preserve the state information." The Examiner references column 11, lines 62-67 and columns 12-14 as disclosure that teaches the subject matter of claim 30. The Applicant has carefully considered the referenced text, but is unable to fine any teaching or suggestion that approaches the subject matter of the claim. The Examiner is respectfully requested to clarify the passage where it is believed the subject matter of claim 30 is taught by *Bayeh*.

Therefore, neither of the implementations set forth in claims 29 and 30 is described in *Bayeh*.

Claims 48-64

Independent claims **49**, **52**, **56**, and **60** set forth subject matter similar to that discussed in conjunction with claim **28**. Accordingly, these claims and those claims dependent thereon are allowable over *Beyeh*.

Claim 49 recites "network components" that route: "a request from a first endpoint device to a second endpoint device;" and "replies from the second endpoint device back to the first endpoint device, wherein at least one reply contains state information pertaining to the second endpoint device." Furthermore, claim 49 recites "network components" that "maintain the state information;" and "reassociate the state information with a subsequent request being routed from the first endpoint device to the second endpoint device." *Beyeh* simply does not teach or suggest the indicated features of claim 49.

PAGE 23/25 * RCVD AT 8/5/2005 2:39:19 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-6/34 * DNIS:2738300 * CSID:2063154004 * DURATION (mm-ss):06-02

Claim 52 recites "network means for routing requests from a client to a server and for routing a reply from the server back to the client, wherein the reply contains state information pertaining to the server; and the network means comprising means for maintaining the state information within the network means and for reassociating the state information with a subsequent request from the client to the server." *Beyeh* does not teach or suggest the features of this claim as well.

Claim 56 recites "a network" that routes "a request from a first endpoint device to a second endpoint device," and that further routes "a reply from the second endpoint device back to the first endpoint device, wherein the reply contains state information pertaining to the second endpoint device." Furthermore, the claim recites "maintaining the state information at the network." *Beyeh* does not teach or suggest at least the indicated limitations of claim 56.

Claim 60 recites "routing a request from a client to a server over a network; routing a reply from the server back to the client over the network, wherein the reply contains state information pertaining to the server; and maintaining the state information on the network while awaiting a subsequent request from the client to the server." *Beyeh* does not teach or suggest the features of this claim as well.

PAGE 24/25 * RCVD AT 8/5/2005 2:39:19 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-6/34 * DNIS:2738300 * CSID:2063154004 * DURATION (mm-ss):06-02

Conclusion

Claims 28-30 and 48-64 are in condition for allowance. Applicant respectfully requests reconsideration and prompt allowance of the subject application. If any issue remains unresolved that would prevent allowance of this case, **the Examiner is requested to contact the undersigned attorney to resolve the issue**.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 12-0769 for any additional fees required under 37 CFR §1.16 or under §1.17; particularly, extension of time fees.

Respectfully Submitted,

Date: 8-5-2005

By: _____

Tim R. Wyckoff
Lee & Hayes, pllc
Reg. No. 46,175
206.315.4001 x110

PAGE 25/25 * RCVD AT 8/5/2005 2:39:19 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-6/34 * DNIS:2738300 * CSID:2063154004 * DURATION (mm-ss):06-02